ESA: East and Southern Africa

From the Camera's Lens: Challenges and Opportunities

Babati: Pigeon Pea sole (background); intercrop with maize (fore)

Babati…crop diversification, including agroforestry

Kongwa/Kiteto: Degraded, dry…

…and still degrading!

Livestock Integration: manure management; livestock/crop conflicts

Kilombero North: Pests, diseases…

Okra

Rice

Agronomy: crop arrangements and residue management

Uncontrolled irrigation: Environmental and health consequences

…post-harvest handling, value addition, and

(dis)organized marketing

Interventions: the Malawi example of mother and baby adaptive experimentation with farmers

A: Mother trials

Sole maize

- Unfertilized maize – *for establishing base yields depending soil resource*
- Maize + mineral fertilizers NPKS – *for establishing water limited yield potential*
- Maize + manure/compost + NPKS – *for establishing water limited yield potential*

Sole grain legumes (these could receive P, no more than 10 kg ha^{-1})

- Sole groundnut (*variety trials*)
- Sole cowpea or inoculated soyabean (*(for dry or wet agro- ecologies)*
- Doubled-up legumes: option A (pigeonpea/groundnut intercrop)
- Doubled up legumes: option B (pigeonpea/cowpea or soyabean intercrop)

A maize/grain legume intercrops

- Maize/pigeonpea intercrop
- Maize intercropped with any other grain legume prioritised by hosting farmers
- Maize relay cropped with a green manure legume - *rehabilitation strategy for degraded soils*

Babies (adaptive trials)

Action group farmers will collectively participate during establishment of the ‘mother’ trials, and subsequently choose a few treatments from the ‘mother’ trials. There will be several sites per village to capture biophysical heterogeneity as well as socio-economic farmer circumstances